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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,018	06/30/2006	Akito Yasuhara	Q92007	2970
23373 7590 05/29/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER OH, TAYLOR V	
			ART UNIT 1625	PAPER NUMBER
			MAIL DATE 05/29/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,018

Applicant(s)

YASUHARA ET AL.

Examiner

Taylor Victor Oh

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-60 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

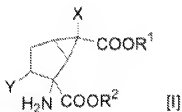
LACK OF UNITY

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1-60, drawn to a non-heteroaromatic or non-heterocyclic compound of formula I:



R¹ and R² are identical or different, and each represents a C₁₋₁₆alkyl group, a C₂₋₁₆alkenyl group, a C₂₋₁₆alkynyl group, a C₁₋₁₆alkyl group substituted by one or two aryl groups, a hydroxyC₁₋₁₆alkyl group, a halogenoC₁₋₁₆alkyl group, an azidoC₁₋₁₆alkyl group, an aminoC₁₋₁₆alkyl group, a C₁₋₁₆alkoxyC₁₋₁₆alkyl group, a C₁₋₁₆alkoxycarbonylC₁₋₁₆alkyl group, a farnesyl

, a C_{1-10} alkyl group substituted by a group represented by formula- $C(O)NR^aR^b$ (wherein R^a and R^b are identical or different, and each represents a hydrogen atom or a C_{1-10} alkyl group), a group represented by formula- $CHR^cOC(O)ZR^d$ (wherein Z represents an oxygen atom, a nitrogen atom, a sulfur atom or a single bond; R^c represents a hydrogen atom, a C_{1-10} alkyl group, a C_{2-10} alkenyl group or an aryl group; and R^d represents a C_{1-10} alkyl group, a C_{2-10} alkenyl group or an aryl group)

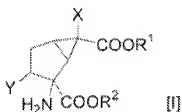
in the case where either R^1 or R^2 represents a hydrogen atom, the other represents a C_{1-10} alkyl group, a C_{2-10} alkenyl group, a C_{2-10} alkynyl group, a C_{1-10} alkyl group substituted by one or two aryl groups, a hydroxy C_{2-10} alkyl group, a halogeno C_{1-10} alkyl group, an azido C_{1-10} alkyl group, an amino C_{2-10} alkyl group, a C_{1-10} alkoxy C_{1-10} alkyl group, a C_{1-10} alkoxycarbonyl C_{1-10} alkyl group, a farnesyl group, a C_{1-10} alkyl group substituted by a group represented by formula- $C(O)NR^aR^b$ (wherein R^a and R^b are the same as described above), a group represented by formula- $CHR^cOC(O)ZR^d$ (wherein Z , R^c and R^d are the same as described

X represents a hydrogen atom or a fluorine atom, and

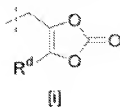
Y represents $-OCH(R^3)R^4$, $-SR^3$, $-S(O)_nR^3$, $-SCH(R^3)R^4$, $-S(O)_nCH(R^3)R^4$, $-NHCH(R^3)R^4$, $-N(CH(R^3)R^4)(CH(R^3)R^4)$, $-NHCOR^3$ or $-OCOR^3$ (wherein R^3 , R^3 , R^4 and R^4 are identical or different, and each represents a hydrogen atom, a C_{1-10} alkyl group, a C_{1-10} alkenyl group, a phenyl group, a naphthyl group, a naphthyl group substituted by one to seven halogen atoms, a phenyl group substituted by one to five substituents selected from a

group consisting of a halogen atom, a phenyl group, a C_{1-10} alkyl group, a C_{1-10} alkoxy group, a trifluoromethyl group, a phenyl group, a hydroxycarbonyl group, an amino group, a nitro group, a cyano group and a phenoxy group; R^5 represents a C_{1-10} alkyl group, a C_{1-10} alkenyl group, a phenyl group, a naphthyl group, a naphthyl group substituted by one to seven halogen atoms, a phenyl group substituted by one to five substituents selected from a group consisting of a halogen atom, a phenyl group, a C_{1-10} alkyl group, a C_{1-10} alkoxy group, a trifluoromethyl group, a phenyl group, a hydroxycarbonyl group, an amino group, a nitro group, a cyano group and a phenoxy group; and n represents integer 1 or 2)].

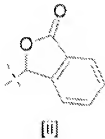
Group II, claims 1-59, drawn to a heterocyclic or heteroaromatic compound of formula I:



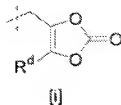
R^1 and R^2 are identical or different, and each represents



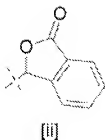
a 4-morpholinyl C_{1-10} alkyl group,



in the case where either R^1 or R^2 represents



a 4-morpholinylalkyl group,



Y represents $-\text{OCHR}^3\text{R}^4$, $-\text{SR}^4$, $-\text{S}(\text{O})_n\text{R}^4$, $-\text{SCHR}^3\text{R}^4$, $-\text{S}(\text{O})_n\text{CHR}^3\text{R}^4$, $-\text{NHCOR}^4$,

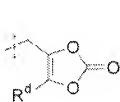
$-\text{N}(\text{CHR}^3\text{R}^4)(\text{CHR}^3\text{R}^4)$, $-\text{NHICOR}^4$ or $-\text{OCOR}^5$ (wherein R^3 , R^4 , R^5 and R^6 are identical or different, and each represents heteroaromatic group, R^5 represents heteroaromatic group

The inventions listed as Group I, and Group II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons.

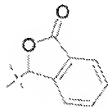
The international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept (" requirement of unity of invention ").

PCT Rule 13.2 states " Where a group of inventions is claimed in one and the same international application, the requirement of unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression " special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

In the instant case , the invention of Group I is directed to the compound of formula [I] with the non-heteroaromatic or non-heterocyclic substituent , whereas the invention of Group II is directed to the compound of formula [I] with the heteroaromatic or heterocyclic substituent , such as morpholinyl group or



[i]



[ii]

furyl, pyrrolyl, thiophenyl, oxazolyl, isoxazolyl, imidazolyl,

pyrazolyl, thiazolyl, isothiazolyl, oxadiazolyl, thiadiazolyl, benzofuranyl, indolyl, benzothiophenyl, indazolyl, benzoisoxazolyl, benzoisothiazolyl, benzoimidazolyl, benzooxazolyl, benzothiazolyl, pyridinyl, quinolinyl, isoquinolinyl, pyridazinyl, pyrimidinyl, pyridinyl, cinnolinyl, phthalazinyl, quinazolinyl and quinoxalinyl.

These heteroaryl groups are attached to the main core structure. They have different modes of operation, different functions or different effects because each linker has a completely different chemical structure with respect to the core structure. For example, the reactant containing a heteroaryl group has been known to have a different reactivity or a different effect in comparison with the one with the non-heteroaryl groups. Therefore, Group I and Group II are unrelated to each other. In addition, each invention has a different use and effect due to unrelated substituents attached to the core of the compounds. Therefore, there is no single general inventive concept and no unity of invention for the method or the process as defined in 37 CFR 1.475.

From this, the Group II is not required for the invention of Group I. Therefore, there is no special technical feature between Group I and Group II.

Therefore, there is no single general inventive concept and no unity of invention for the method or the process as defined in 37 CFR 1.475.

37 CFR 1.475 states that a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combination of categories:

- a. A product and a process specially adapted for the manufacture of said product;
or
- b. A product and a process of use of said product; or

- c. A product, a process specially adapted for the manufacture of the said product, and a use of the said product; or
- d. A process and an apparatus or means specially designed for carrying out the said process; or
- e. A product, a process specially adapted for the manufacture of the said product, and an apparatus or means specially designed for carrying out the said process.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(l).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Taylor Victor Oh/
Primary Examiner, Art Unit 1625

5/27/09